

**FIG. 1**

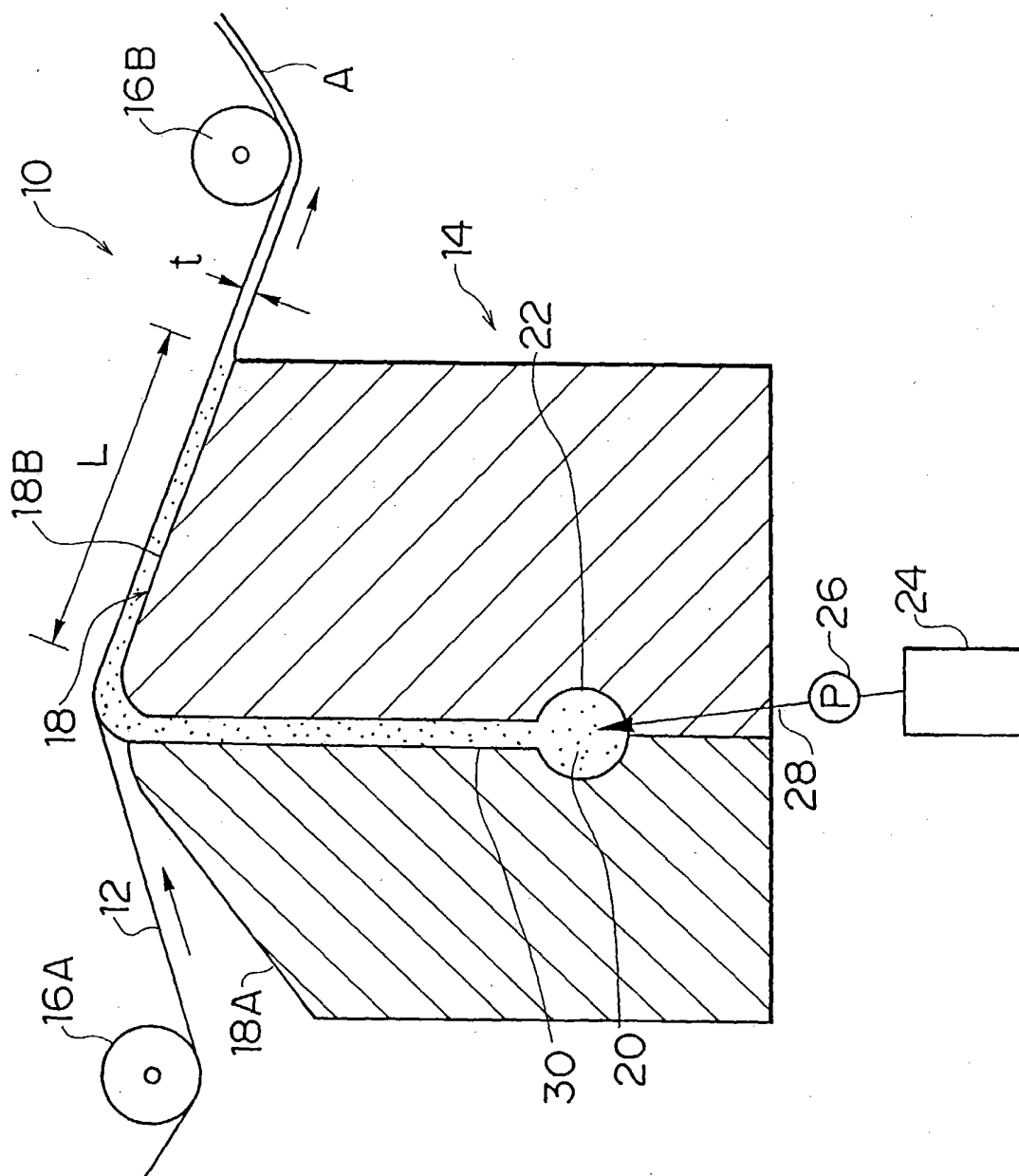


FIG.2

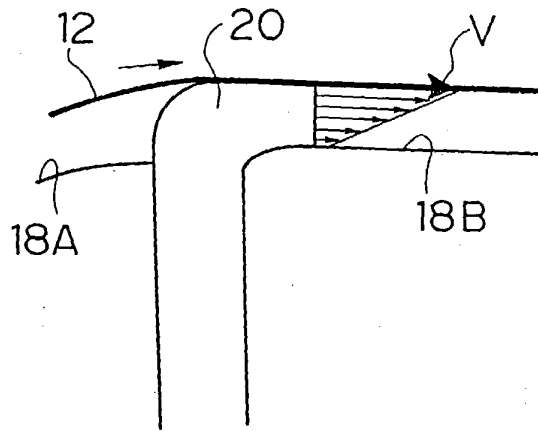




FIG.4

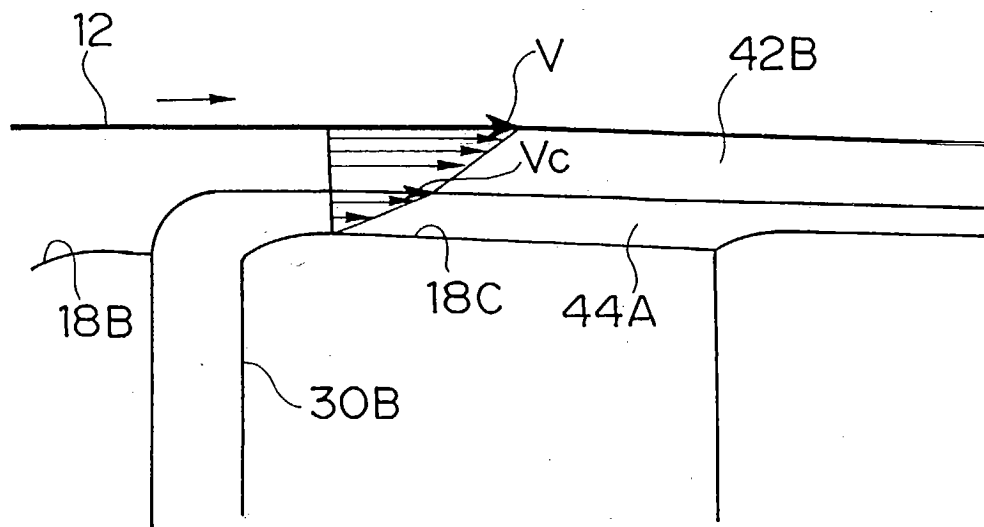


FIG.5

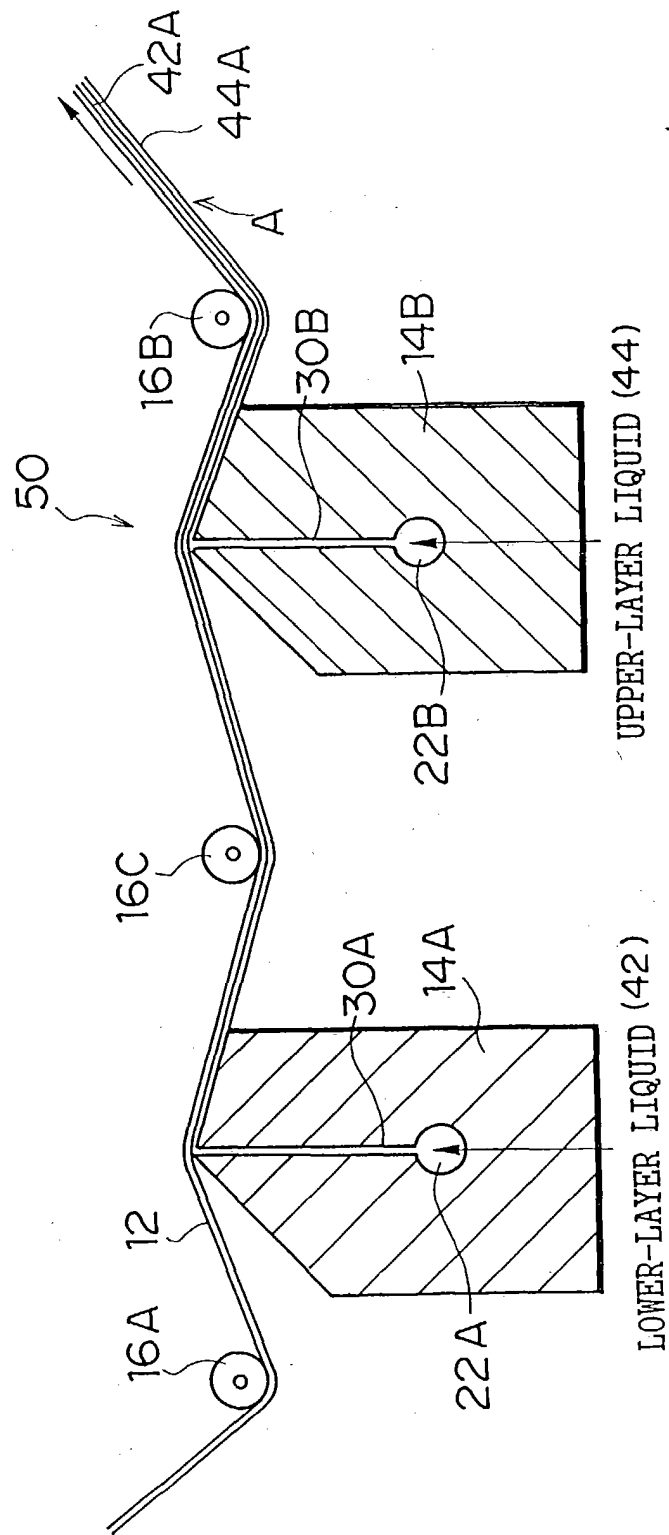


FIG.6

| WET THICKNESS FOR<br>UPPER-LAYER<br>COATING<br>( $\mu\text{m}$ ) | VISCOSITY OF<br>UPPER-LAYER<br>LIQUID<br>( $\text{mPa}\cdot\text{s}$ ) | WET THICKNESS FOR<br>LOWER-LAYER<br>COATING<br>( $\mu\text{m}$ ) | VISCOSITY OF<br>LOWER-LAYER<br>LIQUID<br>( $\text{mPa}\cdot\text{s}$ ) | FACE LENGTH OF<br>DOCTOR LIP<br>( $\text{mm}$ ) | COATING<br>VELOCITY<br>( $\text{m}/\text{min}$ ) | SHEARING ENERGY<br>FOR UNIT VOLUME<br>( $\times 10^6$ ) | SURFACE<br>ROUGHNESS<br>( $\text{nm}$ ) |
|--|--|--|--|---|--|---|---|
| 0.25   | 7.5  | 5.6  | 14.4   | 3   | 200  | 6.65  | 13.9                                    |
| 0.91   | 7.5  | 5.6  | 14.4   | 3   | 200  | 2.63  | 18.7                                    |
| 0.91   | 7.5  | 7.1  | 14.4   | 3   | 200  | 1.59  | 22.5                                    |
| 0.93   | 7.5  | 5.5  | 14.4   | 3   | 400  | 4.26  | 15.5                                    |
| 0.93   | 7.5  | 5.7  | 13.4   | 3   | 400  | 3.57  | 17.7                                    |
| 0.93   | 10.3   | 5.7  | 13.4   | 3   | 400  | 5.14  | 16.8                                    |
| 0.91   | 7.5  | 5.6  | 14.4   | 10  | 200  | 7.07  | 11.2                                    |
| 2.3  | 13.8   | 8.4  | 18.8   | 3   | 300  | 2.15  | 20.8                                    |
| 2.5  | 13.8   | 13.9   | 18.8   | 3   | 300  | 0.85  | 25.1                                    |
| 5  | 7.5  | 7.1  | 14.4   | 3   | 200  | 0.28  | 28.1                                    |
| 5  | 7.5  | 0  | 14.4   | 3   | 200  | 0.75  | 22.3                                    |

FIG.7

